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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,864	06/12/2001	Francesco Lazzeri	P/62250	3488

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EXAMINER	
CHEN, TSE W	

ART UNIT	PAPER NUMBER
2116	6

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/879,864	LAZZERI, FRANCESCO	
	Examiner	Art Unit	
	Tse Chen	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 June 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Claims 1, 8, 13, and 15-16 are objected to because of the following informalities:

- As per claim 1, "where so required..." in step b should be "*when* so required...";
- As per claim 13, "N independently configurable communications and..." on the second line of the claim should be "N independently configurable communications *units* and..."; and
- As per claims 15 and 16, the term "SDH" should be declared explicitly as "synchronous digital hierarchy" in order to avoid confusion.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4-5, 7-8, and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Reese, U.S. Patent 5583796. [1]

4. As per claim 1, Reese taught an invention for effecting protection of a digital communication system having an independently configurable communication unit [switching control unit 135] and a protection unit [backup switching control unit 119] allocated to the

[1] Although the following citations may refer to different embodiments, the focused matter in each instance is consistent among the embodiments [column 1, lines 65-67; column 11, lines 15-18].

communications unit [where 1 is less than or equal to K is less than or equal to N; N=K=1; column 6, lines 38-40], the invention comprising:

- In an initial setting-up stage for the protection unit, supplying the protection unit with configuration data relating to the communication unit [column 1, line 62 to column 2, lines 4; column 2, lines 31-34] and storing said data in respective memory locations in the protection unit [column 1, lines 65-67; column 4, lines 20-21];
- Where so required, subsequently updating said data with update data relating to said communication unit [column 6, lines 31-33];
- In the event of a fault occurring involving the communication unit, sending to the protection unit an indication that the communication unit is involved in the fault [column 7, lines 19-22; column 11, lines 55-58]; and
- Causing the protection unit to use said indication to identify the memory location associated with the fault-related communication unit and to use the configuration data in that memory location as its own configuration data, thereby to take over the role of that communication unit in the communications system [column 10, lines 43-50; column 11, lines 58-64].

5. As per claim 4, Reese taught the indication is sent to the protection unit by way of a controller unit which controls the configuring of the communication units [backup controller 36'].

6. As per claim 5, Reese taught the indication is sent to the protection unit from the controller unit by way of a bus [Ethernet 10BaseT; column 11, lines 26-31].

7. As per claim 7, Reese taught the fault is detected by a sensor device [backup controller 36'; column 11, lines 55-60] and the indication is sent to the protection unit directly by the sensor device [column 10, lines 54-57].

8. As per claim 8, Reese taught the configuration data associated with the communication unit is supplied to the protection unit [as N=K=1, the configuration data is supplied in consecutive sequence to the protection unit; column 1, line 62 to column 2, lines 4].

9. As per claim 12, Reese taught K=1 [column 6, lines 40-41].

10. As per claim 13, Reese taught an invention for a 1:1 protection arrangement for a digital telecommunications system having an independently configurable communication unit [switching control unit 135] and a protection unit [backup switching control unit 119] allocated to the communication unit [where 1 is less than or equal to K is less than or equal to N; K=N=1; column 6, lines 38-40], the invention comprising:

- A means for supplying the protection unit with configuration data relating to the communication unit [column 1, line 62 to column 2, lines 4; column 2, lines 31-34] and storing said data in the protection unit [column 4, lines 20-21; column 6, lines 39-40];
- A means for subsequently updating said data with update data relating to said communication unit [column 6, lines 31-33];
- A means for sensing the occurrence of a fault involving the communication unit [column 11, lines 54-55];
- A means for sending to the protection unit an indication that the communication unit is involved in the fault [column 7, lines 19-22; column 11, lines 55-58]; and

- A means for causing the protection unit to use said indication to access the configuration data associated with the fault-related communication unit and to use said configuration data as its own configuration data, thereby to take over the role of that communication unit in the communications system [column 10, lines 43-50; column 11, lines 58-64].

11. As per claim 14, Reese taught protection arrangement wherein K=1 [column 6, lines 40-41].

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 2, 6, and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reese as applied to claim 1 above, and further in view of Gerstel et al., U.S. Patent 5793746, hereinafter Gerstel.

14. It should be noted that although Reese discloses a communications system with 1:1 ratio of protection units to communications units, it would be obvious to one with ordinary skill in the art to configure the system to have a ratio of one protection unit to a plurality of communications units (1:N) in order to provide a safe system with a larger coverage while controlling costs by avoiding the need to purchase additional protection units.

15. Reese taught an invention for protecting a communication system having an independently configurable communication unit and a protection unit.

16. However, Reese did not disclose expressly alternative functions for the protection unit or alternative ways to signal the protection unit.

17. As per claim 2, Gerstel taught an invention for protecting a communication system with a plurality of protection units [abstract; FIG. 2], wherein one or more of the protection units are low-priority traffic carrying units [column 7, lines 41-44] and are supplied with their own configuration data [column 7, lines 47-48].

18. As per claim 6, Gerstel taught the indication is sent to the protection unit directly by the fault-related communications unit [column 6, lines 16-20].

19. An ordinary artisan at the same time the invention was made would have been motivated to look for a more efficient way to operate communication systems with protection units [Gerstel: column 4, lines 37-41].

20. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Reese and Gerstel because of the aforementioned motivation and also their involvement in similar problems regarding the protection of communication systems. Furthermore, it would have been obvious to an ordinary artisan to adapt the multiple communication/protection units system of Gerstel to work with the one-to-one unit system of Reese because the present issues involving the two configurations of communication systems are generally related.

21. As per claim 9, Gerstel taught before the protection unit takes over the role of the fault-related communications unit in the communications system, the traffic previously associated with the protection unit is either diverted to a working communications unit or is discarded [column 7, lines 45-47].

22. As per claim 10, it would have been obvious to an ordinary artisan, after the protection unit has taken over the traffic of the fault-related communications unit, the fault which occasioned such taking over is rectified, the taken-over traffic is redirected back to the fault-related unit, to provide the protection unit with its own configuration data and supply traffic again to the protection unit – in effect, restoring the communication system to its normal operation and fulfilling the objective of improving utilization [Gerstel: column 4 lines 39-41].

23. As per claim 11, it would have been obvious to an ordinary artisan, once the fault has been rectified, to reconfigure the fault-related communications unit with the configuration data currently required of that unit. Otherwise, the communication system would not operate effectively. Furthermore, the configuration-data updating attribute as taught by Reese [column 1, line 62 to column 2, lines 4; column 2, lines 31-34] would mean these configuration data are sent to the one or more of the protection units.

24. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reese as applied to claim 1 above, and further in view of Lennie et al., U.S. Patent 6092213, hereinafter Lennie.

25. Reese taught an invention for protecting a communication system having an independently configurable communications unit and a protection unit.

26. However, Reese did not disclose expressly the details for updating the configuration data on the protection unit.

27. Lennie taught an invention for updating configuration data in a protected communication system [abstract], the invention comprising of sending an identification flag to the one or more of the protection units [column 2, lines 47-50, lines 57-59] before the configuration-update data

relating to the communications units are sent [column 2, lines 60-65], in order to identify the particular communications unit to which the update data pertain [column 2, lines 66].

28. An ordinary artisan at the same time the invention was made would have been motivated to look for a consistent and accurate way to maintain configuration data in a protected communication system [Lennie: column 2, lines 7-21].

29. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Reese and Lennie because of the aforementioned motivation and also their involvement in similar problems regarding the protection of communication systems. Furthermore, it would have been obvious to an ordinary artisan to adapt the multiple communication/protection units system of Lennie to work with the one-to-one unit system of Reese because the present issues involving the two configurations of communication systems are generally related.

30. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reese as applied to claim 13 above, and further in view of Nishikawa et al., U.S. Patent 6658457, hereinafter Nishikawa.

31. Reese taught an invention for protecting a communication system having N independently configurable communications units and K protection units where 1=<K=<N.

32. However, Reese did not disclose expressly the details of the communication system.

33. Nishikawa taught an invention for transmitting information, the invention comprising of an SDH communication system configured to operate with protection units [column 5, lines 21-30].

34. An ordinary artisan at the same time the invention was made would have been motivated to look for key technologies to be implemented with a protection scheme for communication systems [Nishikawa: column 3, lines 53-54].

35. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Reese and Nishikawa because of the aforementioned motivation and also their involvement in similar problems regarding communication systems.

Conclusion

36. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Keiles, U.S. Patent 4141066, disclosed an invention for protecting a communication system with a protection unit operable to replace a failed communications unit.

b. Delaney et al., U.S. Patent 5996086, disclosed an invention for protecting a communication system comprising of multiple configuration data.

c. Deitz et al., U.S. Patent 6578158, disclosed an invention for recovering from a failed communication event after the protection unit has been put into operation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tse Chen whose telephone number is (703) 305-8580. The examiner can normally be reached on Monday - Friday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (703) 308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tse Chen
May 3, 2004

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